BULLETIN
of the
Chicago Herpetological Society

Volume 31, Number 3
March 1996

BULLETIN OF THE CHICAGO HERPETOLOGICAL SOCIETY
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The BULLETIN of the Chicago Herpetological Society (ISSN 0009-3564) is published monthly by the Chicago Herpetological Society.

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Bull. Chicago Herp. Soc. 31(3):41-43, 1996

Two Examples of Twinning in the Red-eared Slider (*Trachemys scripta elegans*)

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Introduction

Twinning in turtles is not a common phenomenon. Consequently, turtle twins tend to be reported in the literature (see Hildebrand, 1938; Tucker and Funk, 1976; Plymale et al., 1980; and Eckert, 1990, for reviews). A number of cases have been reported for *Trachemys scripta*, including examples of conjoined twins (Plymale et al., 1980; Padgett, 1987) and double-yolked eggs (Tucker, 1995).

During the course of a study of reproduction and twinning in *T. s. elegans*, living examples of a conjoined set of twins and a set of subequal sized twins hatched. Because such twins are uncommon, I report on them herein. They were among several sets of twins observed.

Materials and Methods

Both females that produced the eggs containing twins were collected at Swan Lake, a contiguous backwater of the Illinois River, in Calhoun County, Illinois. The female that produced the conjoined twins was collected on 1 June 1995. She had a plastral length of 202 mm and weighed 1.525 kg. The female that produced the other set of twins was collected 3 June 1995. She had a plastral length of 227 mm and weighed 2.025 kg. Both females were marked and released after oviposition was induced with oxytocin (Ewert and Legler, 1978). All eggs in the two clutches were weighed on a Sartorius electronic balance to 0.01 g.

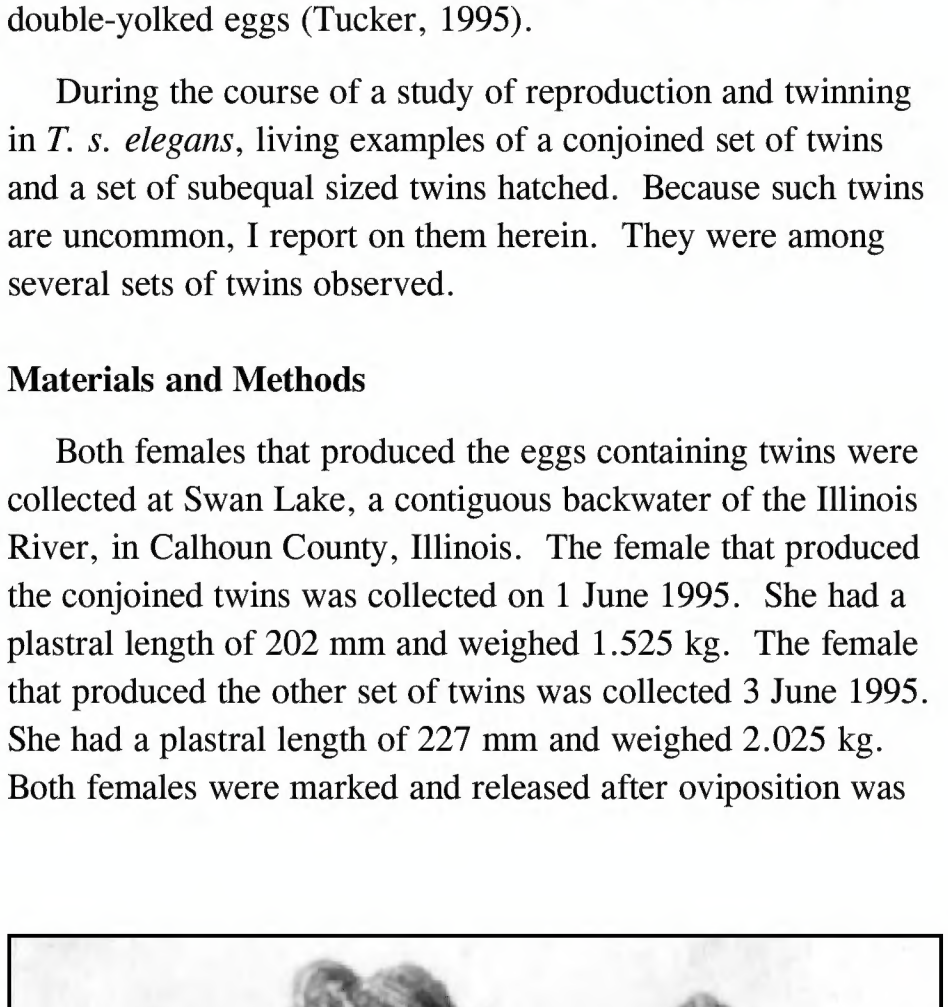

Figure 1. Dorsal view of conjoined *Trachemys scripta elegans* twins. Carapace length is 25.7 mm.

Figure 2. Anterior view of the conjoined twins shown in Figure 1.

Eggs were incubated on vermiculite (300 g vermiculite : 350 ml water) at ambient temperatures that ranged from 16 to 36°C with a daily average of 24°C. In both cases, hatchlings pipped the eggs and left the egg shells unaided. Once hatched all turtles including the twins were weighed to 0.01 g and the carapace lengths measured to 0.1 mm.

Results and Discussion

The data gathered for the twins and their siblings are summarized in Table 1. These data and data on other sets of twins will be presented in greater detail in a forthcoming paper on twinning in turtles by the author and Dr. Fredric J. Janzen.

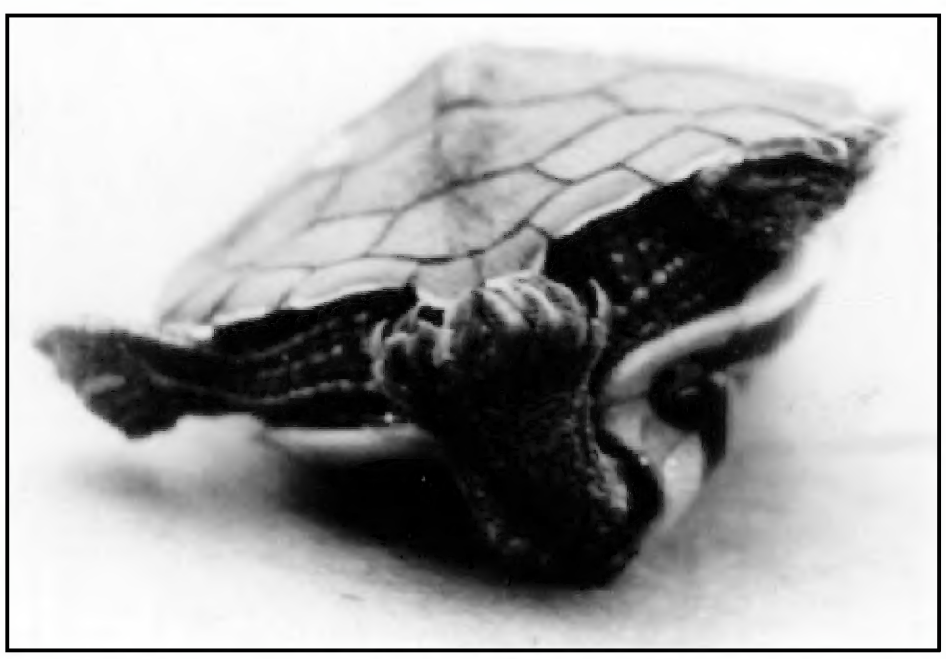

Figure 3. Posterior view of the conjoined twins shown in Figure 1.

Table 1. Morphometric details on two unusual sets of twins and their siblings of the red-eared slider, *Trachemys scripta elegans*, from Illinois. All masses in grams and all lengths in millimeters. CL = carapace length; SD = standard deviation.

Twins				Other eggs/hatchlings from the clutches containing the twins						
	Eggs	Hatchlings			Eggs		Hatchlings			
	Mass	Mass	CL		Mass		Mass		CL	
				N	mean ± SD	range	mean ± SD	range	mean ± SD	range
Set 1	11.67	8.27	25.7	13	11.10 ± 0.39	10.23–11.62	8.70 ± 0.28	8.21–9.14	31.2 ± 0.70	30.1–32.3
Set 2	12.92	4.59 4.62	25.7 26.6	4	12.93 ± 0.33	12.51–13.24	9.05 ± 0.33	8.60–9.40	32.6 ± 0.71	32.0–33.6

Set 1 = conjoined twins; Set 2 = two individual living twins.

The conjoined set of twins is clearly morphologically abnormal (Figures 1–3). This creature has six legs, two heads, two tails, one shell, and one plastron. It is quite active and remains alive at this juncture. The heads behave independently. It appears from a cursory examination that the left head runs the left legs, whereas the right head runs the right legs. Like many politicians, it tends to be on both sides of an issue simultaneously, and thus makes little progress. I found it remarkable that it was able to pip and escape from the egg unaided (but see Padgett, 1987, for an account of a set of conjoined twins that apparently was able to emerge from a natural nest).

The other twins are morphologically normal but only about half the size of their siblings (Figures 4–5, Table 1). Interestingly, the plastral patterns (Figure 5) of these two turtles differ suggesting that they are dizygotic (i.e., fraternal) rather than monozygotic (i.e., identical). These two turtles were interconnected and apparently shared a single yolk sac (Figure 5).

Acknowledgements

I thank Moynell M. Tucker for assistance in collecting females and eggs. This research was partially supported by the Illinois Natural History Survey and the Upper Mississippi River System Long Term Resource Monitoring Program.

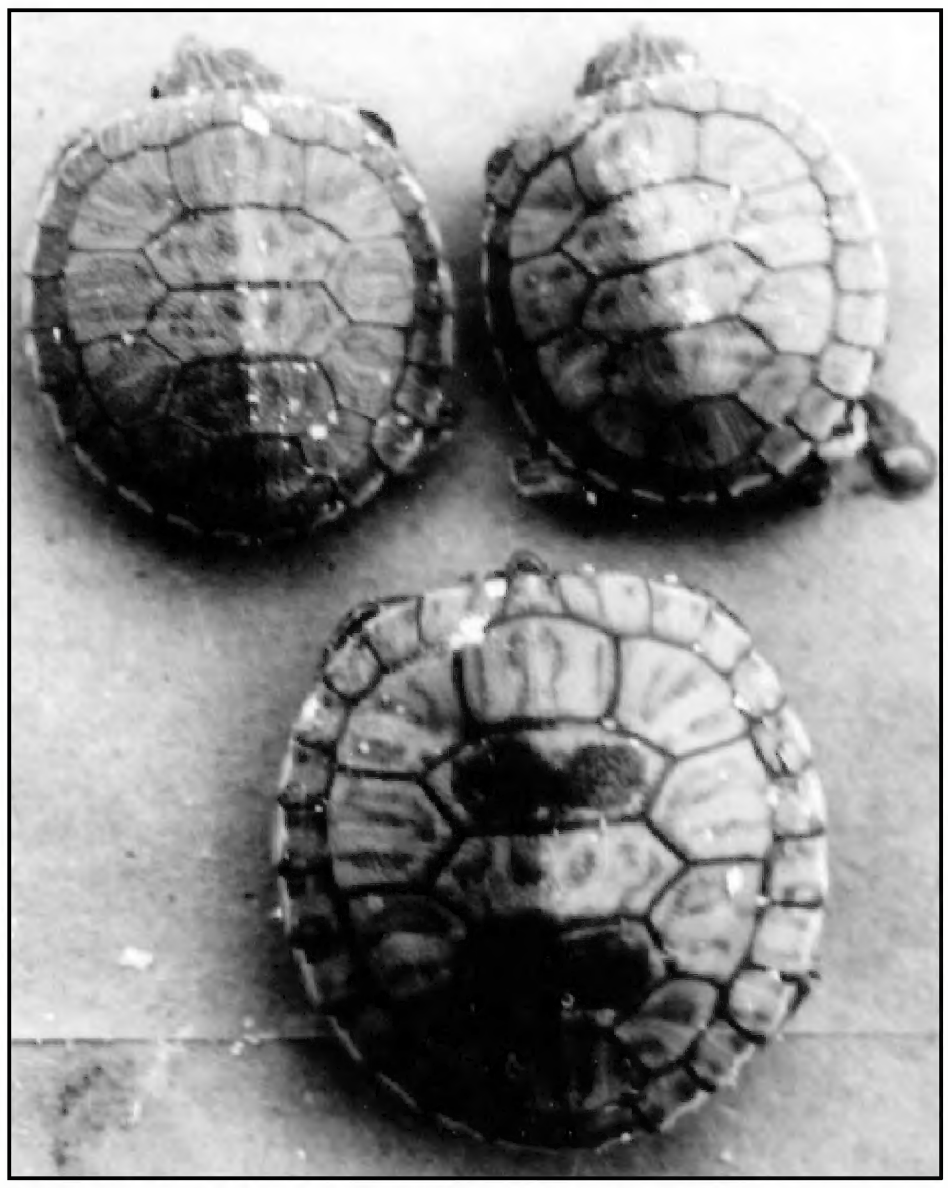

Figure 4. Dorsal view of symmetrical twins of *Trachemys scripta elegans* (small turtles) with a sibling shown for comparison. Carapace of twin on the left is 26.6 mm long.

Figure 5. Ventral view of twins and sibling shown in Figure 4.

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Bull. Chicago Herp. Soc. 31(3):43, 1996

Attempted Mating Between Two Color Pattern Morphs of *Cnemidophorus inornatus* (Little Striped Whiptail Lizard)

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On 3 June 1992, while studying lizards of the genus *Cnemidophorus* at Picacho (23°8′12″, 105°14′0″W at 1250 m elev.), 14 km NW El Pueblito on the Rio Conchos, Municipality of Aldama, Chihuahua, Mexico, JEC observed an attempted mating of an unstriped morph by a striped morph of *Cnemidophorus inornatus* Baird, albeit under unusual circumstances. Based on Wright and Lowe's (1993) systematic revision of *C. inornatus*, we would have expected Picacho to be inhabited only by boldly striped individuals of a seven-striped subspecies, namely *C. inornatus heptagrammus* Axtell. However, an unstriped female of *C. inornatus* (sides of body, hindlimbs, and base of tail red-brown; middorsal region with distinct gray-beige lichenoid markings) was observed at Picacho near railroad tracks at an abandoned depot in 1992. The unstriped female was wounded with a BB shot, after which it ran a short distance and began to flail its tail from side to side. At this time a striped male of *C. inornatus* ran to her, seized her middorsal region in his jaws, curled his body around her, and inserted a hemipenis in her cloaca. Subsequently, the unstriped lizard was caught, the sex and identity confirmed, and then lost when it revived and bounded from the hand unexpectedly.

Another unstriped individual, a male, and numerous striped individuals of *C. inornatus* were collected at Picacho in 1993 and entered in the University of Arkansas Department of Zoology collection to provide vouchers of the presence of both morphs at this locality.

This is the first report of unstriped and striped morphs of *C. inornatus* at a site other than the type locality at Villa de Garcia, Nuevo León, Mexico (see Axtell, 1961). We regard the behavioral sequence observed at Picacho, Chihuahua, even though it followed on the heels of human intrusion, as evidence that an unstriped pattern in *C. inornatus* neither impedes interspecific recognition nor successful matings with striped individuals of the species. Body movements (e.g., the induced tail flashing in the unstriped female), in addition to color pattern, may be important in mate attraction in *C. inornatus*.

Acknowledgements

Specimens were collected in Mexico under the provisions of a permit obtained from the government of Mexico.

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Bull. Chicago Herp. Soc. 31(3):44-47, 1996

Natural History Notes on the Great Plains Narrowmouth Toad, *Gastrophryne olivacea*, in New Mexico

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Abstract

The Great Plains narrowmouth toad (*Gastrophryne olivacea*) is known in New Mexico from four sites near Hermanas, Luna County. Surveys conducted in 1992–93 indicate that the species occurs in syntopy with four native anuran species and the non-native bullfrog, *Rana catesbeiana*. Preliminary data on reproduction, behavior, habitat, adult and tadpole morphology, and possible threats to this population are presented.

Introduction

The Great Plains narrowmouth toad (*Gastrophryne olivacea*) is a small microhylid of the south-central and southwestern United States and much of northern and central Mexico (Nelson, 1972b; Conant and Collins, 1991). The species occurs primarily in grassland and desert–grassland habitats and is active mainly during summer rains. Although *G. olivacea* has been well-studied on the Great Plains (Fitch, 1956), little is known about the species in the southwestern United States.

Gastrophryne olivacea has been infrequently encountered in New Mexico. The species was first detected in the state in July 1977 when the call of a single male was recorded at Hermanas, Luna County (E. Stegall, written com. to W. G. Degenhardt). Degenhardt (1986) subsequently collected a single specimen from a rain-filled depression east-southeast of Hermanas in 1986. Two males were heard calling but could not be located in a temporary pond east of Hermanas on 31 August 1989 (CWP, pers. obs.). Based on its marginal distribution and uncertain status in New Mexico, the New Mexico State Game Commission listed *G. olivacea* as State Endangered in 1988.

Survey Methods

Surveys for *G. olivacea* were conducted by one of us (JNS) in southern Luna County during 1992–93. Field observations were made on 21–22 June, 30–31 July, 16 August, and 5 September 1992, and 23–24 and 29–30 August 1993. Most site visits were made during or following heavy rainfall in the survey area when terrestrial activity by *G. olivacea* was expected. Audio surveys were conducted by slowly driving through the study area at night and listening for anuran choruses. Potential breeding sites (temporary pools) located during the day were surveyed for larvae and resurveyed after nightfall for adults. Localities reported by previous workers were visited. Specimens referenced in the text are in the University of New Mexico Museum of Southwestern Biology (MSB).

Results and Discussion

During 1992 *G. olivacea* was found at only one site, where 16 adult males were observed or collected during 30–31 July and tadpoles were collected on 16 August. No *G. olivacea* were found in 1993. The following information is based on field work in 1992–93 and on previous collecting efforts in this area.

Distribution -- *Gastrophryne olivacea* is known from four localities in New Mexico, all in southern Luna County along New Mexico Highway 9. These sites, as plotted in Figure 1, are: (1) Hermanas, northeast corner of junction of Highway 9 and the Deming–Hermanas Road (tape-recording of calling male; E. Stegall, in litt.); (2) 6.9 km by road east of Hermanas (CWP, pers. obs.); (3) 8.8 km east and 3.2 km south of Hermanas (MSB 47045; Degenhardt, 1986); and (4) 11.2 km east and 4 km south of Hermanas (MSB 54673–76 and 54896; this study). The location of site 3 was incorrectly reported by Degenhardt (1986) as 1.6 km instead of 3.2 km south of Hermanas.

Based on available data, *G. olivacea* in southwestern New Mexico occurs primarily within the drainages of Simpson and Hermanas Draws, south-flowing intermittent streams that empty into a closed basin centered in northern Chihuahua, México (the Pleistocene "Lake Palomas"). The New Mexico records may represent a northern extension of an unknown population in extreme northern Chihuahua or may be relictual and isolated from known populations farther south in that Mexican state (Nelson, 1972b). The New Mexico sites are between 1280 and 1341 m in elevation.

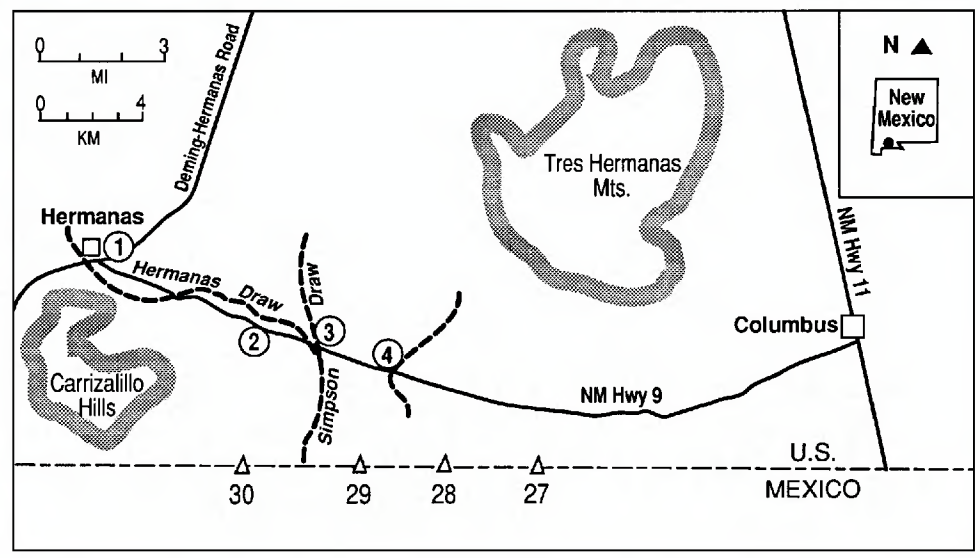

Figure 1. Survey area and its approximate location (inset) in southern Luna County, New Mexico. Numbered dots are known localities of *Gastrophryne olivacea* as discussed in text; numbered triangles are selected U.S.–Mexico boundary monuments. Heavy dashed lines are intermittent stream channels.

Although no specimens or observations are available, *G. olivacea* also may occur in northeastern New Mexico (Collins, 1979). Verified localities of occurrence in southern Baca County, Colorado (Hammerson, 1980; 1986), and western Cimarron County, Oklahoma (Collins, 1979), are associated at least peripherally with the canyons and slopes of Black Mesa (Mesa de Maya), a geologic formation which extends into extreme northeastern Union County, New Mexico. Little effort has been made to locate the species in this part of New Mexico where, if present, it probably has a very limited range.

An unsubstantiated report for Hidalgo County, New Mexico (Williamson et al., 1994), is likely based on a specimen record obtained from Tulane University during a survey of their collection by Degenhardt et al. (in press). The record is erroneous (H. Dundee, pers. com. to C. W. Painter), and there is no evidence that this species occurs in Hidalgo County.

Historic and Present Habitat -- One of the principal historic vegetation types in southern Luna County was tobosa (*Hilaria mutica*) grassland or tobosa swales within desert–grassland (Dick-Peddie, 1993). Photographs of the U.S.–Mexico border taken during the 1890s indicate that the area near Border Monument No. 29 (Figure 1) was formerly an extensive tobosa grassland (Humphrey, 1987). Agricultural development of the Hermanas area began earlier in this century, and much of the area at present is irrigated farmland with adjacent unfarmed areas dominated by creosotebush (*Larrea tridentata*). Tobosa grass still occurs in patches, such as along roadsides, or in a few large areas protected from erosion (as at Monument No. 27; Humphrey, 1987), but is no longer a significant vegetation community in the study area due to farming and cattle ranching. It is possible that *G. olivacea* used these grassy swales prior to their replacement by farm fields.

All four sites examined during 1992–93 were found to be in close proximity to roads, farmland, or livestock grazing areas. Sites 1 and 2 were in shallow depressions in grazed areas, and sites 3 and 4 were in the undeveloped right-of-way between the highway and the grade of an abandoned railroad. In 1992, the site 3 drainage channel had been recently excavated of accumulated sediment and little vegetation was present. The site 4 pool was adjacent to a concrete spillway constructed in the railroad grade, behind which was impounded a small irrigation pond. High water in this pond flowed over the spillway and produced a ca. 400 m × 10 m roadside pool following heavy rainfall in July 1992. Clumps of dead grass and other dead herbaceous growth (mostly mustards and sunflowers) were present in the site 4 pool in July and August.

Reproductive Activity and Behavior -- Prior to surveys in 1992–93, calling male *G. olivacea* in New Mexico were encountered on 27 June, 25 July, and 31 August; in each case, activity occurred shortly after heavy rainfall (W. G. Degenhardt, pers. com.; E. Stegall, in litt.; CWP, pers. obs.).

During the 1992 surveys, calling males were found on 30 and 31 July at site 4, following a thunderstorm on the afternoon of the 30th. A census of calling males was conducted on 31 July and 12 individuals were counted within the ca. 4000 sq m pool (an additional four males were collected from this site the previous night). Chorusing began shortly after nightfall (ca. 2100 h) on both nights. *Gastrophryne olivacea* were observed calling in a vertical posture (perpendicular to the water surface) from within or immediately adjacent to emergent clumps of grass. Water depths at these calling sites were 12–30 cm, although most *G. olivacea* were found in less than 20 cm of water. Calling individuals were usually well-hidden in the turbid water and among emergent grasses with only the head visible above the water surface.

Tadpoles were collected at site 4 on 16 August 1992, 16–17 days after calling males were observed there. No *G. olivacea* tadpoles were collected at site 4 during 30–31 July when calling males were present and the pool was apparently newly-formed. No tadpoles were present on 5 September (36–37 days after the chorus was observed) when the pool was nearly dry. Collins (1993) stated that free-swimming tadpoles of this species in Kansas metamorphose in 20 to 30 days, and Fitch (1956) reported a larval stage of 24 days for one breeding event in Kansas. Our observations are consistent with the reproductive data for Kansas populations.

Tadpoles of *G. olivacea* observed in 1992 were unique in their behavior compared to other anuran larvae encountered in the study area. The tadpoles were observed to float motionless just beneath the water surface for several minutes at a time (similar to behavior noted by Bragg, 1947). *Spea* sp. tadpoles in the same pool, however, were more active and usually were not visible in the turbid water except when they briefly surfaced.

Specimen Descriptions -- The five adult specimens available from Luna County (MSB 47045 and 54673–76, all males) have the following characteristics. Color in life: dorsum light tan to grayish-tan with a mostly irregular pattern of dark speckling, primarily concentrated in the inguinal area and on the hind legs and extending anteriorly to the head fold (dorsal speckling on one specimen almost forms a pair of paravertebral stripes); venter white and immaculate except for gular area which is dark gray bordered by gray-and-white mottling (this mottling is also evident on the venter of the hind legs). Snout–vent length: 25.4–29.5 mm, mean = 28.0 mm.

Our sample of tadpoles consists of 13 individuals (MSB 54896; 24–31 mm total length; mean = 27 mm) at Gosner (1960) developmental stages 35–38 (mean = 37). Tadpoles in life were grayish-tan dorsally, similar to the adults, with a mottled gray-and-white venter. The ventral mottling was similar in appearance to that on the throat and legs of the adults as described above. The tip of the tail was dark brown to black.

Degenhardt (1986) noted that the subspecies of his specimen was problematic. Nelson (1972a) found little evidence for the recognition of subspecies in *G. olivacea* and the species is presently considered to be monotypic by most workers.

Diet -- The four adult specimens collected in July 1992 defecated the remains of ants within three days after capture. Ants are an important dietary item of *G. olivacea* elsewhere in its range (Conant and Collins, 1991).

Occurrence with Other Species -- Male *G. olivacea* ob-

served and collected at site 4 were found in the same roadside pool as calling *Bufo debilis*, *Bufo cognatus*, *Scaphiopus couchii*, and *Spea multiplicata*. Two adult female *Rana catesbeiana* were also taken at the same location on 30 July 1992 and had evidently dispersed from the adjacent irrigation pond, the only permanent water in the immediate area. *Bufo debilis* was typically the most common anuran heard calling in the Hermanas area during field work in 1992–93. Tadpoles of *G. olivacea* and *Spea* sp.(possibly *S. multiplicata*) were found together in the drying pool at site 4 in August 1992.

Thamnophis marcianus was found at temporary pools near site 4 on three different occasions. One snake had ingested an adult *B. debilis* and another was feeding on tadpoles in a pool that contained larvae of *Bufo* sp., *Spea* sp., and *S. couchii*. This species is a likely predator of both adult and larval *G. olivacea* in New Mexico.

Status and Possible Threats -- Our current information on *G. olivacea* in New Mexico is fragmentary. Additional field work is needed to determine the distribution, population size, and habitat requirements of the species in the state. The following comments on possible threats to *G. olivacea* are preliminary.

Since the late 1800s, agriculture has replaced much of the original grassland and desert–grassland habitat, particularly tobosa grass swales, in the Hermanas area (Humphrey, 1987). Natural drainage channels and swales have been filled in or modified, sometimes extensively, to level farm fields and protect roads from flooding (pers. obs.). The result has probably been a concomitant reduction in natural habitat for *G. olivacea*. However, artificial water sources such as irrigation ponds located adjacent to farm fields (as at site 4) may actually contribute to the creation of suitable breeding sites. The persistence of four other species of desert anurans in the study area suggests that pesticide use associated with farming practices may not be a significant threat to this species.

Much of the study area is used for cattle grazing. The right-of-way for Highway 9 at site 4 is one of the few unfarmed areas east of Hermanas that has not been subjected to recent grazing. Roadside sloughs with dense grass are often suitable breeding sites for *Gastrophryne* spp. elsewhere in their range (JNS, pers. obs.). Grazing within the highway right-of-way, such as was observed between site 4 and Hermanas in 1992, may reduce the availability of this microhabitat for narrowmouth toads. We suspect that other species of anurans in the study area, all of which are widely distributed in New Mexico, may be more tolerant of grazing impacts than *G. olivacea*.

Rana catesbeiana is a known predator of other anurans, including *G. olivacea* (Fitch, 1956), and has become established in many non-riverine sites in New Mexico where man-made permanent waters (such as irrigation ponds) are present (Degenhardt et al., in press). One adult *R. catesbeiana* taken in July 1992 at site 4 had ingested two adult *Bufo* spp. (Stuart, 1995). In late August 1993, newly-metamorphosed *R. catesbeiana* were abundant at site 3 and smaller numbers were present at sites 2 and 4 and elsewhere in lower Simpson Draw. Although bullfrogs may be involved in the decline of native leopard frogs (*Rana* spp.) in some areas of the Southwest (e.g., Hayes and Jennings, 1986), the effect (if any) of this introduced predator on *G. olivacea* in New Mexico remains to be determined.

Acknowledgements

We thank W. G. Degenhardt for comments. The personnel of Pancho Villa State Park (Columbus) and the U.S. Border Patrol provided weather information and other assistance during surveys in the Columbus–Hermanas area. Beth Dennis prepared the map. Funding and collecting permits were provided by the New Mexico Department of Game and Fish Share With Wildlife Program and Endangered Species Program (both to JNS).

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Bull. Chicago Herp. Soc. 31(3):47-48, 1996

Book Review: *A Guide to the Reptiles and Frogs of the Perth Region*

by Brian Bush, Brad Maryan, Robert Browne-Cooper and David Robinson
University of Western Australia Press, Nedlands, Western Australia, 6907, Australia
xiv + 226 pp. ISBN 1 875560 42 4
$19.95 Softbound [Available from CHS Book Service - Member's Price $17.95]

Raymond Hoser
41 Village Avenue
Doncaster, Victoria 3108
Australia

At about the time of the 1993 2nd World Congress of Herpetology in Adelaide, a rash of new reptile books came onto the market. Since then, relatively few new books on Australian herps have become available. However, since the congress Australian reptile people haven't been idle and another burst of reptile publications is set to enter the market. Books due out before the end of 1996 include a revised edition of Cogger's bible, a new book on snakes by Allen Greer, a photographic guide by Gerry Swan (just released), and a book on tortoises by John Cann.

A Guide to the Reptiles and Frogs of the Perth Region has just been released. It is a systematic appraisal of the herpetofauna of the Perth region in Western Australia, which includes the area within about 50 km from the Perth city center. Although in the cooler southern half of Australia, Perth still boasts a wide variety of species, most of which are endemic to that part of Australia. Currently known from the area are 16 species of frog, 51 lizards, 24 snakes, four sea turtles and two freshwater tortoises.

In compiling the book, the authors have not taken any short cuts; all that should be in a field guide or similar reference is present. The book opens with the obligatory acknowledgments, preface and so on. There follows a brief chapter about the West Australian Society of Amateur Herpetologists (otherwise known as WASAH), which was formed as a local society and to lobby the local wildlife department (the Conservation and Land Management Department, called CALM) to reform what may be the most draconian reptile licensing laws and practices in Australia.

The introduction accurately provides the following:

- The area covered by the book including an excellent full-page map of the area
- Identification keys and scientific names—how and why they are used
- Information on interpreting captions (for use in the rest of the book)
- The use of unfamiliar terms (with reference to the excellent glossary at the rear of the book)
- Details of the Perth area and its natural and human-made habitats in terms of vegetation and so on, along with an excellent series of habitat photos with detailed captions
- A detailed conservation section, which castigates local laws that could be/are sometimes "used by uninformed or unscrupulous bureaucrats to intimidate whomever they like."

In summary, the introduction lays an excellent foundation for the reader to gain maximum benefit from the rest of the book. The writing is simple in style and easy to read. The content should be of use to everybody from the uninformed person with no prior knowledge of reptiles through to the seasoned expert.

The book then goes through the various frogs and reptiles, each being covered in logical, sequential order. For each order of reptiles is an accurate summary, followed by a key and then individual species descriptions. These descriptions are very well put together and designed principally to aid in

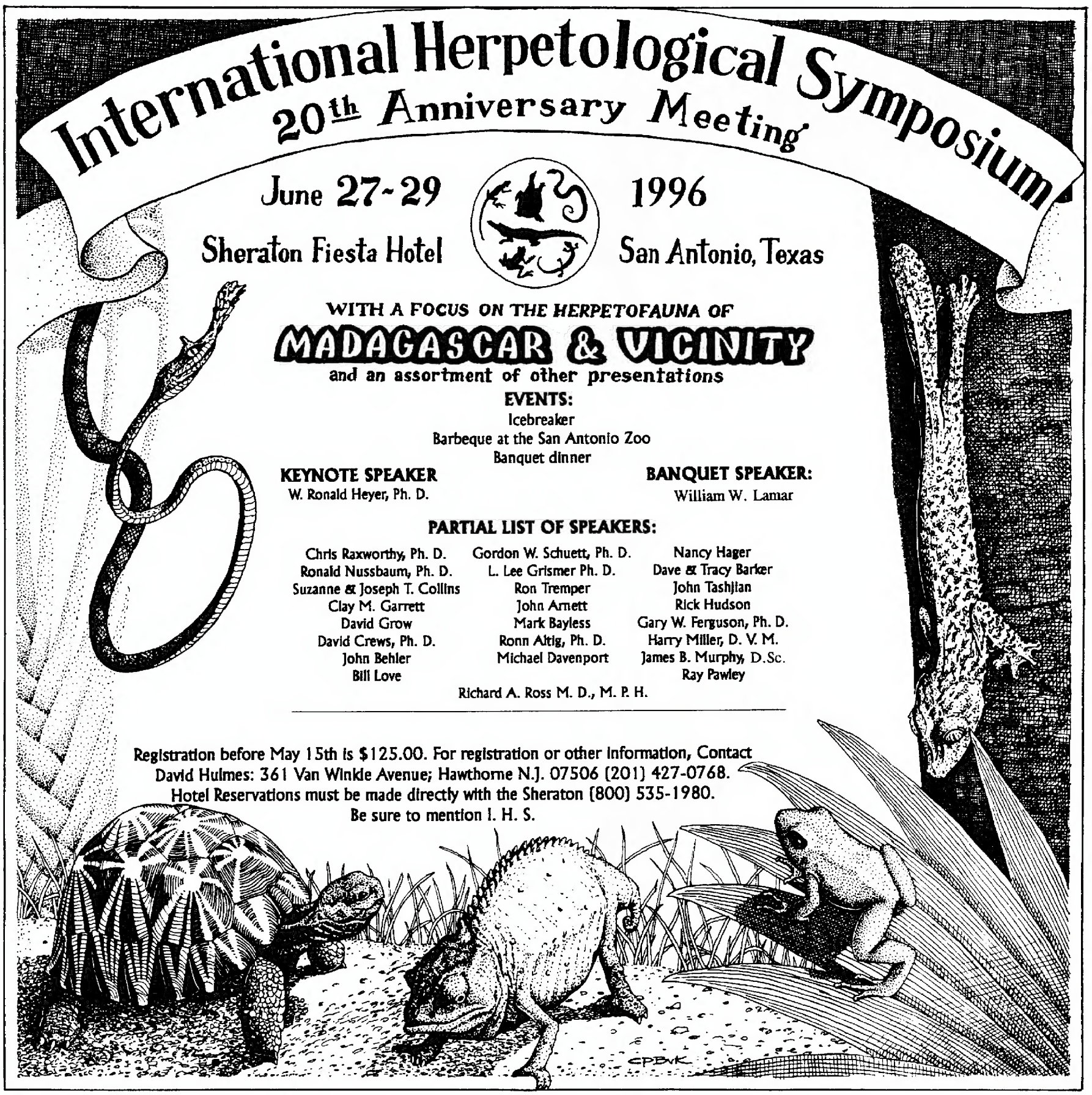
identification of animals by the reader.

Most descriptions fit on a single page and commence with a heading (the species names—common and scientific), immediately followed by a large color photograph of the said species with locality information included in the caption. Following is information on preferred habitat, a detailed description of the animal and then a section presenting other relevant information, usually under the heading "General". Alongside this information for each new genus is a "box" giving important information about the genus. The photos themselves, while uncredited (which I think is a fault with the book) are of excellent quality and hard to fault. They are presumably the result of the authors' own efforts, although some were sourced from elsewhere as noted in the Acknowledgments section.

Following the descriptions (which take up the bulk of the book) are chapters on: commonly asked questions; snakebite; snakes and people; and dogs, cats and snakes. These are followed by a bibliography, a list of references cited, a glossary, an index and then two pages about first aid for snakebite.

As I said previously, this book takes no shortcuts and is a thorough, well-produced work. The design and layout of the book are user-friendly and hard to fault. The book appears in the main to be consistent throughout. Those who decide to prepare similar regional field guides to reptiles and frogs would be well advised to refer to this book as an example of what to aim for and if possible surpass in terms of presentation, information provided and so on. As an opinion, I didn't like the design of the front cover; I thought it was unduly cluttered with cut out photos of various local herp species set in and amongst the title, which fills the entire cover.

The subject matter of the book may not be of direct interest to those outside of the Perth area in Western Australia, in particular, to most reptile people in the United States. Nevertheless I recommend the book to anyone with a specific curiosity about reptiles or frogs from that part of the world or to anyone with a general interest in herpetology. Its relatively cheap price makes it a particularly worthwhile purchase.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Bull. Chicago Herp. Soc. 31(3):49-51, 1996

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by Ellin Beltz

Year of Snakefood

According to Chinese astrology, 1996 is the Year of the Rat. Famous people born in previous Rat years include: Shakespeare, Mozart, Churchill, Washington and Truman Capote. Incidentally, the year 2000 is the next Year of the Dragon followed by 2001, the Year of the Snake. [Chinese restaurant menu]

Lights, driving, action!

The struggle between humans and sea turtles for Florida's beaches continued in 1995. Here's a running commentary on the issue from local journals. Please keep your eyes out this month as snowbirds arrive in Florida and Spring Break approaches, there may be more stories.

• March 19, Palm Beach, FL *Daily*: "Town may strengthen lighting ordinance to protect turtles." The existing ordinance prohibited lighting on a voluntary compliance basis to protect turtle nesting season, from April 1 to October 31. Hatchling sea turtles follow light. Before beach lighting, the sea reflected on the sky beckoned the tiny turtles into the surf. Now, cumulative megawatts of houses, cars, roadways, business signs and so on, drown out the oceanlight in much the same way as orange street lights cancel starlight. Confused hatchlings have died after being attracted by artificial light. A research associate at the state's Department of Environmental Protection said, "I think [restricting beach lighting] is necessary because although no one really wants to see hatchlings die . . . , not everyone remembers to turn off the lights." Town staff say few people in Palm Beach are not in compliance with the proposed ordinance since many buildings were built after the council prohibited beach-facing lights on new oceanfront construction in 1987. [from Kathy Bricker]

• July 16, Daytona Beach *News-Journal*: "Beach showdown. Turtle defenders hope lawsuit drives vehicles off sand." The County Attorney said, "I believe it's unlikely that the court would upset the status quo [driving on beaches] . . . without a strong showing of immediate harm, which we think is lacking."

Residents and visitors are split nearly 50/50 on the issue of to drive or not to drive. Some believe that banning beach driving would "ruin the local economy." Others say that only two or three turtles a year are affected by driving without citing any source for their numerical belief. [from Phil Drajeske]

• July 21, Daytona Beach *News-Journal*: "Artificial lights and tire ruts already have interfered with baby sea turtles' instinctive trek to the sea in seven instances since hatching started this month. Documentation on six of the seven . . . accompanied a brief. . . ."

• July 25 Orlando, FL *Sentinel*: "Ormond Beach . . . About 100 baby turtles emerged from a nest. . . . Mistaking street lights for moonlight reflecting off the ocean, they scrambled up a beach ramp to busy [roads]. . . . The turtles packed the intersection. . . . At least 78 were crushed by cars. . . . The U.S. Fish and Wildlife Service . . . was notified. . . ." Because the road lights are Volusia County property, "The incident caused much fingerpointing . . . over which agency was responsible for turning off the lights. . . . A federal judge is trying to decide if Volusia County should be hit with an injunction to do more for sea turtles. . . . The injunction would force Volusia County to toughen its coastal lighting ordinance and could prohibit driving on the beach during nesting season. . . . 'There were tons of turtles in the road,' said . . . a waitress at a nearby restaurant who dashed into the intersection to save the turtles. 'I was frantic.'" [from Bill Burnett]

• August 2, *USA Today*: "A federal judge in Orlando, Florida, banned nighttime driving or parking along 40 miles of seashore around Daytona Beach to protect endangered loggerhead and green sea turtle nests and hatchlings. The order is in effect until November 1. The tradition of motoring and parking on the hard-sand beaches dates to the early 1900s." [From Bill Burnett and Steve Ragsdale]

• August 4, Daytona Beach *News-Journal*: "Volusia keeps cars off beach for now. Beach-goers experience a rare sight Thursday on The World's Most Famous Beach—no cars (except beach ranger and lifeguard vehicles). The county has banned beach driving until further notice. . . ." Some people were fuming, suggesting irreparable harm to the economy for every day it was closed. The beach was initially closed because of Hurricane Erin. Then came the U.S. District Judge's order to keep cars out of a 30-foot zone to the seaward of dunes where sea turtles place their nests and to get cars off the beach from one hour before sunset to one hour after dawn. So, the county banned all driving until it could be sure it was in compliance. [from Phil Drajeske]

• August 5, Leesburg, FL *Daily Commercial*: Implementation of the judge's order is expected to take at least a week and the nighttime driving ban will do away with beach parking during Spring Break, 1996. Hundreds of thousands of collegiate visitors to Florida may be affected. The county manager said the judge's ruling was "prudent and reasonable." [from Bill Burnett]

• August 12, Leesburg *Daily Commercial*: "For two days, the tides washed away many of the lightweight, plastic markers newly installed to designate turtle 'conservation zones,' forcing officials to temporarily close portions of beaches to motorists [again]." The *Orlando Sentinel* reported, "Many are tolerant of turtle postings. . . ." One visitor observing construction of a car proof barrier said, "I think it's great. What's it for?" One resident said the markers would disrupt a volleyball tournament scheduled for the weekend. So far, Volusia has spent about $10,000 on 2,500 wooden posts needed mark the zone. [from Bill Burnett]

• August 14, Daytona Beach *News-Journal*: "Three crews were scheduled to finish planting the row of four-inch by four-inch treated wood posts four feet into the sand, marking the edge of a conservation zone 30 feet east of the dune line. . . . The county's environmental management department remeasured the conservation zone after high tide . . . wiped out many PVC pipes placed August 4–6. . . . Two sections of beach will remain closed . . . until crews finish. . . ." [from Phil Drajeske]

• August 16, Daytona Beach *News-Journal*: "County's tab for turtle suit tops $100,000" That's just the legal bill for one month to an Orlando firm which lost the Federal case. The lead attorney on the suit said that future bills wouldn't be

nearly as high. Some local residents are "aghast" that the county would have spent so much fighting a suit instead of finding ways to use it creatively to accomplish the same turtle protection goals it is now being forced to undertake. Buying beachfront land and studying preservation tactics were suggested as alternatives to litigation by the Volusia/Flagler Environmental Action Committee. [from Phil Drajeske]

• August 19 Orlando *Sentinel*: "Abnormally prolonged high tides spawned by hurricanes Erin and Felix may have destroyed as many as 6,000 sea turtle nests in Brevard County, smothering 600,000 unborn turtles. As many as 1,000 of 4,000 turtle nests at the Canaveral National Seashore . . . may have been destroyed. . . . Turtle watchers said they have not seen any hatchlings emerge in Volusia since the storms. . . . Central Florida beaches aren't the only ones affected. State officials say all 37 nests in Walton County, which is in the Panhandle, were destroyed." [from Bill Burnett]

• December 7 Orlando *Sentinel*: Volusia County presented federal agencies with their conservation plan for sea turtles on county beaches. If accepted by the agencies, the county could apply for an "incidental take" permit by mid-Spring, 1996. Some turtle deaths on beaches would therefore be allowed and the terms of all this are to be covered in the conservation plan and agreement. The county's plan is less "severe" on humans than what the Federal Judge ordered in midsummer. [from Bill Burnett]

Not quite their year anyway

As if the town of Daytona Beach hadn't enough excitement with the sea turtle injunction, the following also happened in 1995:

• more recorded shark bites (16) than ever before;
• several weeks of stinging jellyfish named "Portuguese men-of-war" and dangerous rip tides;
• reduced beach-driving toll revenues $3.2 million in 1995 down $400,000 from 1994; and
• unusual tides due to the high number of hurricanes.

The traditional beach season opened February 1. The county passed increased fees to make up for the revenue loss to the treasury of night driving. [Gainesville, FL *Sun*, January 1, 1996, from K. Dodd]

A ship in time saves ten

The U.S. Navy just saved the lives of some sea turtles after sailors in a helicopter spotted 11 turtles tangled in an abandoned fishing net. One turtle drowned, ten were saved after two hours of cutting by five crewmen in an inflatable boat dispatched by the guided missile frigate USS Curts. The net was drifting about 375 miles west of Bombay, India. [Albuquerque, NM *Journal*, October 21, 1995, from J. N. Stuart]

Other turtle and tortoise tales from 1995

• The Tennessee Senate approved two herps as official state critters: the cave salamander and the box turtle. The bill was prepared by school students studying herpetology and legislation in class. [Memphis, TN *Commercial Appeal,* May 25, from Bill Burnett] Quite a curriculum!

• On a lighter turtle note, the London, Ontario, Canada *Free Press* reported that 300 turtles registered for the 21st annual Ailsa Craig Gala Days turtle race. The races were busted by Provincial Police in 1984 after receiving a tip that people were betting on the outcome. In 1993, the Ontario Fish and Game Act amendments made it illegal to trap midland painted turtles. Race organizers appealed for a permit to trap and release contestants. It was granted under the condition that turtle education is provided to participants. [July 11, 1995, from Ted Teachout]

• A four-lane bypass of Mississippi Route 63 is on hold until land can be found to establish a gopher tortoise habitat. The only suitable nearby parcel is owned by a person who does not wish to sell. [Memphis, TN *Commercial Appeal*, December 12, 1995, from Bill Burnett]

• In Florida, Uncle Donald's Farm in Lady Lake has participated in rehabbing gopher tortoises over the years. Two of their resident tortoises just hatched three babies, which are reported to look just like their parents, but smaller [Orlando *Sentinel*, October 16, 1995, from Bill Burnett]

• The Nevada Department of Transportation has approved spending $300,000 for the next two years to help Clark County dig tortoise tunnels and minimize roadway impacts for desert tortoises. [Las Vegas, NV *Review-Journal*, February 14, 1995, from Bob Pierson]

• Clark County, Nevada, commissioners unanimously voted to spend $40 million over the next 30 years to protect desert tortoises while maintaining development and economic growth. The County prepared and submitted a conservation plan to the U.S. Fish and Wildlife Service and a temporary permit which has been in effect for four years will be replaced by a more permanent agreement. A development fee equal to about $110 for a standard house will be assessed. Fees will be deposited in the tortoise trust fund and monies will be disbursed for closing roadways and building tortoise tunnels under other roads. Research to guide management objectives will also be funded by the trust. No one appeared before the Commissioners to complain about the final plan after years of controversial public hearings. [Las Vegas *Review-Journal*, July 19, 1995, from Bob Pierson]

• Another report from the *Review-Journal* points out that the long-term Clark County plan includes maintaining a 500,000 acre protected desert tortoise habitat and adds, "So maybe this long-range plan is a better deal for the desert tortoise. It acknowledges that we can't really protect the species on private land and asks developers to pay for their preservation. . . . Anyone who bought a quarter-acre lot would be paying about $135 to help buy desert tortoise habitat . . . a small price to teach our children about conservation. . . . Time will tell if it turns out for the best. And for the desert tortoise, which has been around for 160 million years, time is running out." [July 29, 1995, from Bob Pierson]

• Twenty-nine Palms, California, is not the most tranquil site on earth. In fact Marine F-18 jets and other military ordinance, however, has to be put on hold whenever a desert tortoise is spotted on the 6,000 acres marked as "out of bounds: tortoise nesting areas." [New Orleans, LA *Times-Picayune*, February 5, 1995, from Ernie Liner]

• Texas is home to the endangered *Gopherus berlandieri*, which now have a rehab center on Freeman Ranch near San Marcos, where they receive veterinary care, shell patches, reconstructive surgery and a diet rich in prickly pears and

other native plants. The ranch is run by the Chair of Southwest Texas State University's Biology Department and one of the experts on the species, Francis L. Rose. [Houston, TX *Chronicle*, April 23, 1995, from Ethelyn L. Rieves]

Turtle and Tortoise Societies

• A woman who found a large box turtle trying to cross the Airport Road in Williamsburg, Virginia, two years ago now has 22 turtles visiting; some will need permanent care. She founded the Williamsburg Turtle and Tortoise Society which now has more than 50 members who find caretakers for sick or injured turtles found by local residents. The *Virginia Gazette* wrote that while there are no dues to join, donations are always in fashion. They have a bimonthly newsletter, field trips and regular meetings. Contact Ms. Martha Trenholm, (804) 229-4726. [July 26, from Kathy Bricker]

• The Houston Turtle and Tortoise Society was founded to promote environmental consciousness of the value of turtles and tortoises in their natural habitat. The Society disseminates information and places animals for adoption. For information call (713) 682-0451 or (713) 431-1358 [from Ethelyn Rieves]

• The nonprofit Organization for the Protection of Nevada's Resident Tortoises, Inc., publishes a newsletter three times a year, arranges for speakers for other community groups and meetings, provides adoption services, and adoption guidelines and operates a lost tortoise pickup service throughout Clark County. For more information call Betty, (702) 739-8043.

• The eight-year-old Chicago Turtle Club has emerged from hibernation with plans for an April 14 meeting at North Park Village, 5801 N. Pulaski. From 1:00 to 3:00 P.M., they plan to have a turtle show and tell. Old friends and new friends are invited. Parking is available just outside the Nature Center. Contact Lisa Koester for more information, 6121 N. Fairfield Avenue, Chicago, IL 60659.

Brought to you by readers like yourselves

The Turtle Recovery Program of the Wildlife Conservation Society reported on its sixth year of operation assisting conservation of populations of wild turtles on all continents. I am pleased to report that the number of individuals supporting the program has increased, from one paragraph to three pages of the "who's who" of turtle/tortoise lovers. Last year the TRC was involved with conservation of the bog turtle, regulation of international trade in box turtles, gopher tortoise relocations, sea turtle community ecology in Panama, effects of harvesting green turtles in Nicaragua, ecology and management of yellow-spotted Amazon river turtles in Colombia, sustainable use program for the same turtle in Venezuela, a study of forest turtle ecology in a Cameroon Forest Reserve and of tortoises and turtles at a Tanzanian National Park, support for programs for the radiated tortoise in Madagascar, conservation of two rare land tortoises in the Western Ghats of India, turtle community ecology in Thailand, and monitoring and recovery of *Testudo graeca nikolskii* on the Black Sea Coast of Russia. The tales behind these brief clauses are contained in the TRP yearly report and make fascinating reading. In addition, the TRP is close to publishing Conference Proceedings from "Conservation, Restoration, and Management of Tortoises and Turtles" held in 1993 and co-sponsored by the New York Turtle and Tortoise Society. The book is expected in early 1996. So, turtle lovers, get your checkbooks out and write your 1996 support for the "W.C.S.-Turtle Recovery Program." Every donation is tax deductible to the fullest extent of the law and annual reports are available. Mail to: Michael W. Klemens, Wildlife Conservation Society, 185th Street and Southern Boulevard, Bronx, NY 10460. [Every $10, $20, $100 or zillion helps. EB]

Spotlights, please!

In addition to acknowledging this month's contributors, E. A. Zorn, Mark T. Witwer, No Name on Clipping, J. N. Schoenfelder and Dreux Watermoelen, deserve thanks for sending articles, cards, photos, and so on that I found really interesting but couldn't quite figure out how to summarize. You can contribute, too. Send reptile/amphibian stories from your local paper by forwarding the whole page(s) or clippings with date/slug attached. Some people save clippings themselves, others save photocopies because eventually clippings fade. Copyright law prohibits me from urging you to make copies of newspaper stories for anything other than your own use. However you contribute, make sure your name is on every story. Send to: Ellin Beltz, 1647 N. Clybourn Avenue, Chicago, IL 60614-5507 or letters only via e-mail <uebeltz@uxa.ecn.bgu.edu>.

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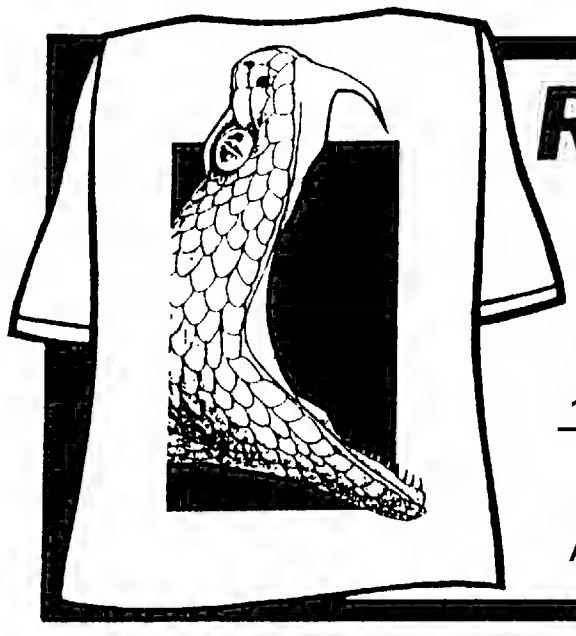

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For sale: rats and mice—pinkies, fuzzies and adults. Quantity discounts. Please send a SASE for pricelist or call Bill Brant, *THE GOURMET RODENT*, 6115 SW 137th Avenue, Archer FL 32618, (904) 495-9024.

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For Sale: **Reptile D-lights.** Our 8% is the first and only fluorescent light bulb that duplicates the UV-B output of the sun while having an excellent color rendition (CRI 91). Let your reptile make *exactly* the right amount of vitamin D. Stop under- or overdosing with all those powders. A must-have for iguanas, uromastyx, bearded dragons and all diurnal basking lizards. Get yours now! Available in 18″, 24″, 36″, 48″. $34.95 each plus shipping. In California please add 7.75% sales tax. Dealer inquiries invited. Scott Solar (909) 627-3274; 9 – 9 Pacific Time or; Reptek@aol.com anytime. For Animal Use Only.

For sale: reptile cage disinfectant and deodorant. Kills many types of infectious disease detrimental to herps. $3.91 for 2 oz (makes 1 gallon). Wholesale and quantity prices available. Make checks payable to Bengal Pets, Inc., 1088 Chapman Road, Jesup GA 31545, (912) 530-6384.

For sale: used mouse-breeding racks, 36 trays per rack, complete with water bottles, trays and fresh breeding stock, $360 per rack. Very space efficient (17″ × 55″ × 80″h). Discounts available on multiple racks. MC/VISA accepted. The Gourmet Rodent, (904) 495-9024.

For sale: **Reptile parasite identification chart and formulary** by Roger J. Klingenberg, DVM—32 color pictures, size comparisons, laminated, and the parasites are keyed to the formulary for the best drug and proper dosage. Indispensible to veterinarians, lab techs and every serious reptile owner. Herpers—buy one for your veterinarian to improve his or her work on **your** reptiles! $12.95 includes postage. Send check or money order to Parasite Chart, % Casper Enterprises, 6297 W. 10th Street, Greeley CO 80634, (970) 351-0936 phone, (970) 352-6220 fax.

For sale: amphibian and reptile books. New, out of print and rare, over 4500 listed. My new 1996 96-page general natural history book list, which includes herpetological books as well, is also available. Send $2 for postage, refundable with any purchase, to: Herpetological Search Service & Exchange, 117 E. Santa Barbara Road, Lindenhurst NY 11757.

For sale: **Gila monster T-shirts**. SSAR Silver Anniversary poster of David Dennis' Gila monster watercolor in full color on 100% preshrunk cotton T-shirt. Shirts come in white or pink, adult sizes S–XL ($16.00), XXL ($19). Add $2 s/h first shirt, $1 s/h each additional shirt. Send check or money order to E.C.O., 325 W. Oakland Avenue, Lansing MI 48906 (donation from each shirt goes to SSAR).

For sale: **Greek tortoises**, long term captives, very healthy and active. Dan, (303) 347-0394, eves. and weekends. [CO]

For sale: c.b. Australian spiny-tail monitors (*Varanus acanthinurus*). One lizard is 15–33″ long, $550. The other is 10–11″ long, $450. Both flawless and in excellent condition. Also, c.b. geckos and yellow-phase bearded dragons soon. Philip Tremper, P.O. Box 264, Clintonville WI 54929, (715) 823-5873.

For sale: two red phase, male *Uromastyx acanthinurus*, long-term animals, healthy, very tame, $300 each; three Australian ridgetail monitors (*Varanus acanthinurus*), adult male and two juveniles, all captive-bred gems, $700 each. Will consider trade for *Uroplatus henckeli*, *Ptenopus garrulus* or *Rhacodactylus*, especially female or pair of *R. chahoua*. Bob Wallen, (813) 237-2530.

For sale: captive-bred Dumeril's monitors, *Varanus dumerilii*, $330 (10% discount to herp society members, $297). Mike, (770) 987-3933. [GA]

For sale: eight leopard geckos (*Eublepharis macularius*), c.b. '95, quickly approaching breeding size, $40–55 each or $295/group; six giant day geckos (*Phelsuma madagascariensis grandis*), c.b. '95, 2–5 months old, $25 each or $120/group; two female anerythristic corn snakes, c.b. '95, $30 each; one male and one female snow corn snakes, c.b. '95, $45 each; inland bearded dragons (*Pogona vitticeps*), c.b. '96, available immediately, singles $65, $45 each in lots of 10 or more. Additional c.b. reptiles available in 1996: *Gekko vittatus*, *Opheodrys aestivus*, corn snakes, high-yellow leopard geckos. Billy Griswold, 2337 SW Archer Road, #710, Gainesville FL 32608, (352) 338-1313, e-mail *v99wgris@student.health.ufl.edu.*

For sale: expected this year. Anerythristic Honduran milksnakes and heteros; tangerine dream Honduran milksnakes; *Lampropeltis pyromelana knoblochi*; Andean milksnakes; pin-striped Mexican milksnakes; locality *alterna* (Langtry, Loma Alta, Christmas, La Linda); Argentine boas. Send SASE for free price list. Dan Johnson, P.O. Box 440893, Houston TX 77244, (713) 589-1874.

For sale: tricolors, albinos and a few secret projects. Send SASE for free price list. Robert Applegate, P.O. Box 338, Campo CA 91906, (619) 478-5123. Also, free husbandry consultation by phone, as a service to the herp community.

For sale: by June, the following hatchlings: corn snakes (*Elaphe g. guttata*), Delaware stock, very red saddles, lots of orange and tan. They get quite large also; my adults all are 4½–5′. The demand for these has been quite heavy, so the time to order is now! Priced reasonably at $40/pair. Also New Jersey stock corns, very pretty, a small but very hardy animal, $40/pair; "red" corns (from a beautiful red Maryland male and an outstanding Charleston female), $30/pair; dusty hognose snakes (*Heterodon nasicus gloydi*), the *nasicus* you almost never see, outstanding east Texas stock, $90/pair [permit required in Illinois]. Currently available: two male and three female Peruvian redtail boas, Iquitos pair, $600, Puculpa trio, $900, or $1300 for the group. Bart Bruno, (203) 773-9257. [CT]

For sale: captive-bred snakes. Blood pythons, Burmese pythons, Kenyan sand boas, black rat snakes, bull snakes. Will deliver in Chicago metro area or ship from O'Hare Airport. Joan Moore, (312) 528-4631.

Advertisements (cont'd)

For sale: two male and two female Amazon Basin emerald tree boas, two-year captives, young adults, breeding potential this year, inquire; one male and two female Papuan pythons, c.b. '94, $1200; male Colombian boa, fantastic light color, young adult, $200. Jay Veltkamp, 160 River Plantation Road, Crawfordville FL 32327, (904) 925-6949.

For sale: beautiful healthy snake—4′ ball python, complete with 55-gallon terrarium, fluorescent light and heating pad. Matt, (312) 406-5377.

For sale: 4½′ albino Burmese python, good eater, $135. Willing to swap for large iguana. Wayne, (708) 599-7982.

For sale: three male and three female Kenyan sand boas, hetero albinos, c.b. 1/96, $375 each. These are from a bright orange male albino (Mark Bell stock) and attractive, unrelated females. This is an inexpensive way to produce rare and expensive ($1500 each) albino Kenyans. Albino Kenyans should be available later this year. Expecting both anerythristic and hetero anerythristic Kenyans this April. Anerythristics will be $350 each, heteros $150 each. Many other colubrids and pythons available. Free price list and photos. Call (619) 265-7557. [San Diego]

For sale: juvenile ('95) rough-scaled sand boas, *Eryx conicus*, $75; juvenile ('95) and three male and one female adult desert sand boas, *E. miliaris*, $125; five male and five female juvenile ('95) olive pythons, *Morelia o. olivaceus*, $700; one 10′ adult male Australian olive python, $1100; one male and one female Moluccan amethystine pythons, 8′–12′, $900/pair or offer. All adult snakes are long-term captives. David Sorensen, 4100 N. 78th Street, Milwaukee WI 53222, (414) 463-6164.

For sale: exclusively captive-bred and born, many offspring available at this time. Boa constrictors (a specialty, many races and subspecies: Colombian, albino Colombian, northern Amazon Basin redtails, Hog Island, Argentine, southern Brazilian, Dominican clouded); pythons (Borneo short-tail, green tree, Macklot's, jungle carpet, spotted, ball); rainbow boas (Brazilian, Colombian, Costa Rican, Argentine); many exceptional colubrids (Louisiana pines, Costa Rican milks, Honduran milks, Veracruz milks, Andean milks, corns, Everglades rats, Taiwan beauties and more). 1996 price list available soon. Call, write or fax for additional info. **Arco Iris Herpetoculture**, 1016 Andover Street, Clinton MS 39056, (601) 924-1409 phone, (601) 924-9766 fax. VISA / MC accepted.

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Tours: Limited bookings available for guided tours of herpetological collection sites in Nevada. Call or fax (702) 471-0240 for reservations. For a brochure send SASE to: CRC, P.O. Box 0731, Las Vegas NV 89125-0731.

Wanted: Wish to purchase quality duplicate slides for a talk on venomous snakes: green mamba, bushmaster, king cobra (and "nest" if possible), European adder (*Vipera berus*), mole viper (*Atractaspis*), Gila monster, close-up of unsheathed fangs of viperid and of elapid, viperid skull, diagram of generalized venom apparatus. Mark Witwer, (610) 873-0823 after 5 P. M. ET or voice mail at (610) 353-6522 ext. 221. [PA]

Wanted: sand boas (*Eryx elegans*, *E. jayakari*, banded *E. johni*, *E. muelleri* and *E. somalicus*). David Sorensen, 4100 N. 78th Street, Milwaukee WI 53222, (414) 463-6164.

Wanted: Spanish marbled newts (*Triturus marmoratus*), especially *males*; and Chinese crocodile lizards (*Shinisaurus crocodilurus*). Object — starting breeding colonies. Eugene J. Herrmann, 336 NE Northgate Way, Seattle WA 98125, (206) 361-2251.

Wanted: female *Varanus timorensis*, female *V. beccarii*, *Shinisaurus*. Mike, (770) 987-3933. [GA]

Wanted: big-headed turtles; mata mata turtles; Mexican giant mud turtles (*Staurotypus triporcatus*); exceptionally large common snappers (45 lbs. & up); large alligator snappers (over 90 lbs.); spectacled caiman from Trinidad, Tobago and Surinam; dwarf caiman; smooth-fronted caiman; albino turtles (except red-eared sliders). Walt Loose, (610) 926-6028, 9:00 A.M. – 1:00 P.M. or after 11:30 P.M. Eastern Time.

Wanted: Styrofoam boxes, any size or shape so long as they're not flimsy, preferably with cardboard liners, willing to pay from $2 to $5. Bring to CHS meetings. Scott J. Michaels, D.V.M, Serpent City, (815) 363-0290.

Line ads in this publication are run free for CHS members — $2 per line for nonmembers. Any ad may be refused at the discretion of the Editor. Submit ads to: Michael Dloogatch, 6048 N. Lawndale Avenue, Chicago IL 60659, (312) 588-0728 evening telephone or (312) 782-2868 fax.

HERP-ACROSTIC #9 *by Mike Dloogatch*

1 L	2 V		3 C	4 I	5 K	6 T	7 H	8 B		9 S	10 G	11 W	12 F		13 V	14 M	15 U	16 D		17 W	18 N	19 G	20 H	21 T
22 J	23 I		24 T	25 V	26 R	27 Q	28 C	29 G	30 N	31 J		32 V	33 O		34 P	35 C	36 I	37 A	38 V	39 W		40 O	41 D	42 S
43 I	44 Q	45 L	46 M	47 G	48 T	49 H		50 A	51 D	52 H		53 L	54 W	55 B	56 U	57 E		58 O	59 V	60 L	61 G	62 F	63 W	
64 V	65 R		66 D	67 U	68 A		69 P	70 K	71 J	72 Q	73 I		74 G	75 C		76 F	77 G	78 M	79 N		80 M	81 C	82 Q	83 U
84 F	85 E	86 A		87 I		88 J	89 P	90 V	91 T	92 B	93 W	94 D		95 I	96 V	97 C	98 K	99 A	100 N	101 R	102 J	103 K	104 W	105 H
106 C		107 S	108 T	109 G	110 R	111 D	112 O	113 M	114 A	115 N	116 F	117 H		118 I	119 C		120 S	121 K	122 U	123 R	124 G	125 D		126 J
127 I	128 D		129 I	130 L	131 M	132 W		133 O	134 V		135 H	136 D	137 F	138 C	139 O	140 W	141 V	142 B		143 B	144 A	145 T		146 N
147 G	148 R	149 U	150 S	151 W	152 V		153 J	154 F	155 P	156 L	157 O	158 N	159 V		160 V	161 P	162 O		163 G	164 F	165 D	166 U	167 I	
168 J	169 P		170 F	171 K	172 G	173 C	174 E	175 S	176 O	177 H	178 Q	179 W	180 I											

How to solve this puzzle: The diagram, when filled in, will contain a quotation from a published work on herpetology. The numbered squares in the diagram correspond to the numbered blanks under the WORDS. The WORDS form an acrostic: the first letter of each spells the name of the author and the title of the work from which the quotation is taken. The letter in the upper right-hand corner of each square indicates the WORD containing the letter to be entered in that square. The solution will appear in next month's *Bulletin*.

CLUES **WORDS**

A. Adjective for *Siren lacertina* or *Cophosaurus texanus*. 86 114 99 144 50 68 37

B. Curl snake. 143 142 55 92 8

C. An irregularly colored area indicating hemorrhaging beneath the skin—a symptom of some snakebites. 35 97 173 28 106 3 119 138 81 / 75

D. Dietary staple for *Tropidoclonion lineatum*. 41 111 94 66 51 165 136 16 125 / 128

E. Of the same family. 57 174 85

F. Sea anemone symbiote. 62 12 164 76 116 170 84 137 154

G. Pertaining to the extinct group of bony fishes from which the amphibians are generally acknowledged to have arisen. 124 77 10 163 147 109 47 172 19 / 29 74 61

H. Aubergine; brinjal; mad-apple; melongena. 52 49 117 135 105 7 20 177

I. Ancient Greek comic poet and playwright. 87 167 127 95 118 4 129 73 36 / 180 43 23

J. One of 11 surviving plays by the above playwright. (two words). 153 126 71 102 88 168 31 22

K. Nucleotide found in RNA, where it substitutes for the thymine found in DNA. 103 5 171 98 121 70

L. _____ snake. 130 60 53 45 156 1

M. Develop gradually. 131 14 113 46 80 78

N. English translation of *Lampropeltis*: _____ shield. 100 146 115 30 18 79 158

O. Producing eggs that mature and hatch outside the body. 133 112 139 58 176 40 33 157 162

P. In Norse mythology, the dragon that guarded the treasure of the Nibelungs and was slain by Sigurd. 169 89 69 34 161 155

Q. Reptile keeper's bane. 44 178 27 82 72

R. Toady (hyphenated). 26 110 101 148 123 65

S. According to a recent study, the European nation with the most deaths from adder bites in the past 125 years. 42 9 107 120 150 175

T. Author of *The Snakes of Texas* (1984) (last name only). 6 21 145 48 24 108 91

U. Shuns. 166 149 56 67 15 83 122

V. Flee toward safety (four words). 59 96 25 152 2 134 90 159 13 / 160 64 141 38 32

W. This could be a slider, racer or water snake. 132 63 11 104 179 17 140 93 54 / 151 39

Unofficial Minutes of the CHS Board Meeting, February 16, 1996

The meeting was called to order at 7:55 P.M. Board members Brian Jones, Art Nohlberg and Marcia Rybak were absent.

Officers' Reports:

The minutes of the January board meeting were read, corrected and accepted. The Treasurer's Report was distributed to the board and accepted. Treasurer Gary Fogel mentioned that raffle income from the January meeting was not up to past levels. Jack Schoenfelder reported that the CHS employee tax forms for 1995 were completed and ready to be mailed.

Membership: John Driscoll reported that the current CHS membership stands at 1,578. Approximately 600 members failed to renew in 1995.

Committee Reports

Expo aka Show: The show committee has decided that the official event name will be "Live Reptile and Amphibian Show." Tony Rattin will design the brochure. Don Wheeler will update the flyer. Tonya Maris announced that the show will be open to the public on Friday, May 24, 6 P.M. to 10 P.M., and Saturday, May 25, 10 A.M. to 9 P.M., at the Clarion Hotel O'Hare. Claus Sutor and Gary Fogel will prepare a floor plan. The next committee meeting will be March 1 at the Humberts.

Legislative: Chris Lechowicz had no news. He did ask the group for any thoughts regarding the January general meeting. Several positive comments were heard. The report back from speaker Sharon Lynn was that she was impressed with the conduct and hospitality of the CHS and had offered to return and speak to us in the future.

Programs: Gary Fogel reminded Chris Lechowicz that we should secure permission now from the Field Museum to have live animals present at the Show and Tell meeting in June.

Shows: Jack Schoenfelder confirmed that he will be in charge of the Salamander Safari on March 31. Jenny Vollman asks that anyone interested in showing herps at the Earth Day Celebration at Volo Bog Nature Center, April 21, contact her. Tony Rattin announced that the Chicago Academy of Sciences would like to hold HerPETological Weekend this year on September 21-22. Tony also announced that Members' Night at the Field Museum will be May 3. They would like us to show animals. He will find 8–10 participants.

Workshops: Nicole Marrello announced that the Caging and Filtration Workshop will be Sunday, May 19, 11 A.M., at The Grove Nature Center. The fee is $10 for members and $15 for nonmembers. Registration is through The Grove.

Old Business

Dr. Gery Herrmann was present to brief the board on a scholarship to be awarded each year to a promising student at the University of Illinois School of Veterinary Medicine. The scholarship is to encourage the study of exotic animal veterinary medicine. Gery explained the basics of how the recipient is selected. He will provide the board with written details on the program. He asked that the CHS contribute $100 toward funding the 1996 scholarship and also a free CHS membership. Mike Dloogatch moved that the CHS contribute $100 and a free membership to the 1996 scholarship award and also allocate a free membership for the 1997 award. Jack Schoenfelder seconded. John Driscoll amended the motion to state that Gery Herrmann represent the CHS in the decision process for awarding the scholarship. The motion passed unanimously.

The board agreed to hold the March 15 and April 19 board meetings at the North Park Village Administration Building.

New Business

Jack Schoenfelder asked the CHS to contribute to a wetlands restoration project at Boone Grove High School in northwest Indiana (Jack's son is involved in the project). After a discussion of the school's goals and its part in the restoration project, Gary Fogel moved that the CHS contribute $50. John Driscoll seconded. The motion passed with Mike Dloogatch and Chris Lechowicz voting against.

Jack presented the CHS with a $50 donation from the Washington School, a result of a program given there by Jack and Ron Humbert.

The possibility of a donation to *FROGLOG* was discussed. No motion was made at this time.

Round Table:

Dottie Humbert informed the board that Adoptions Chairperson Bill Peterson was overwhelmed by the number of iguanas up for adoption. He has some ideas to run past the board.

The New York Turtle and Tortoise Society has placed an action alert on the Internet regarding a decision that the U.S. Fish & Wildlife Service must soon make on whether to allow as many as 10,000 box turtles to be exported from Louisiana to other countries, as pets. NYTTS requests that other herp societies, and individuals as well, send comments to the Office of Scientific Authority before the March 4 deadline. Jill Horwich volunteered to draft a letter on behalf of the CHS.

Tony Rattin announced that Isabel Abrams is putting together a Chicagoland Nature Guide, a reference guide to "nature" type events for 1996. She has asked Tony for CHS event information. Tony will get back to the board with more details.

Dave Golde announced the next CHS Amphibian Club meeting.

The meeting adjourned at 9:15 P.M.

Respectfully submitted by the Recording Secretary,
Audrey Vanderlinden

SUMMER COURSES AT BEAVER ISLAND

The Central Michigan University Biological Station is located on Beaver Island in northern Lake Michigan. Each summer the station offers several sessions of college-credit courses in biology. Some courses are for graduate students only; others are for undergraduates; some even offer college credits to high school juniors and seniors. To learn more about the CMU Biological Station, contact Dr. James C. Gillingham, Director. Before May 1, 1996, he can be reached at CMUBS-Brooks Hall 335, Department of Biology, Central Michigan University, Mount Pleasant MI 48859, telephone (517) 774-3173, fax (517) 774-3462, E-mail J.Gillingham@cmich.edu; after May 1 the address is CMU Biological Station, Beaver Island MI 49782, telephone (616) 448-2325, fax (616) 448-2790.

HANDS-ON CONSERVATION TRIPS

One World Workforce, a nonprofit organization, is seeking individuals to visit and work at conservation projects in Mexico. Three of the projects are herpetological in nature: In Jalisco, volunteers help University of Guadalajara (UG) biologists patrol 12 km of Mismaloya Beach, a nesting ground for large numbers of olive ridley sea turtles and smaller numbers of other species. Also in Jalisco, volunteers are needed to help UG biologists in the Mahajuas Reserve to census the American crocodile. At the Sea Turtle Station in Bahia de Los Angeles, Baja California, volunteers help to capture, tag and release wild sea turtles at their feeding grounds in the Sea of Cortez. Call or write to receive their free newsletter: One World Workforce, Dept. F, Route 4 Box 963A, Flagstaff AZ 86001, telephone/fax (520) 779-3639.

NATIONAL SYMPOSIUM ON THE HUSBANDRY OF VARANIDS AND IGUANIDS

On May 11–12, 1996, at the Town and Country Convention Center in San Diego, California, International Reptile Expositions is putting on the First National Symposium on the Husbandry of Varanids and Iguanids. The preliminary speaker list includes: Dr. Georg Horn; Winston Card; Rick Hudson; Jeff Lemm; Lori Jackintell; Brij Kishor Gupta; Mark Bayless; Frank Retes; John Kincaid; David Blair; Kelly Bradley; and Bob Applegate. Registration fee (does not include hotel or proceedings) is $79 before April 30, $99 after. For information write: International Reptile Expositions, P.O. Box 85152-170, San Diego CA 92186.

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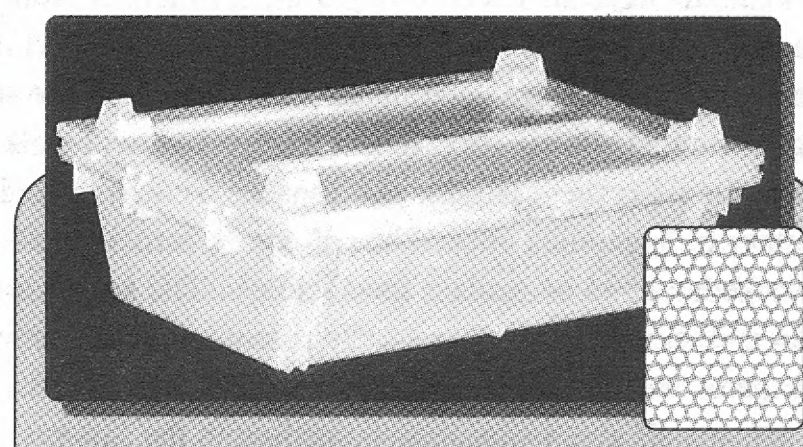

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UPCOMING MEETINGS

The next meeting of the Chicago Herpetological Society will be held at 7:30 P.M., Wednesday, March 27, at the Field Museum of Natural History, Roosevelt Road at Lake Shore Drive, in Chicago. Several of our local CHS members will give short programs at this meeting. President Anthony Rattin will speak and show slides of his trip to the Llanos of Venezuela to study anacondas; Jennifer Picciola, will report on her trip to the Caribbean to study rock iguanas; Jack Schoenfelder will address the topic of "Marketing and Herpetology"; and Jeff Dundek will speak on his herpetological adventures and experiences.

At the April 24 meeting Dr. Val Beasley, of the University of Illinois School of Veterinary Medicine, will speak on "The Decline of the Cricket Frog in Northern Illinois."

We are required to use the entrance on the west side of the museum. We have permission to use the staff parking lot to the west of the museum. Entrance to this lot is from McFetridge Drive, the wide street just to the south, between the museum and Soldier Field. There is also free parking available in the lot to the north of the museum. The #146 CTA bus goes directly to the museum. Unfortunately, it does not operate past 9:00 P.M. However, after the program anyone needing a ride to a CTA stop will have no trouble finding one—just ask any board member.

Turtle Club

The Chicago Turtle Club will meet Sunday, March 24, 1:00–3:30 P.M., at the North Park Village Nature Center, 5801 N. Pulaski, in Chicago.

Amphibian Club

The Amphibian Club will meet on Monday, April 1, 7:00 – 9:00 P.M., at The Grove National Landmark, 1421 Milwaukee Avenue, in Glenview. For information on this group, call Dave Golde at (847) 679-1530.

MARCH 31 SALAMANDER SAFARI

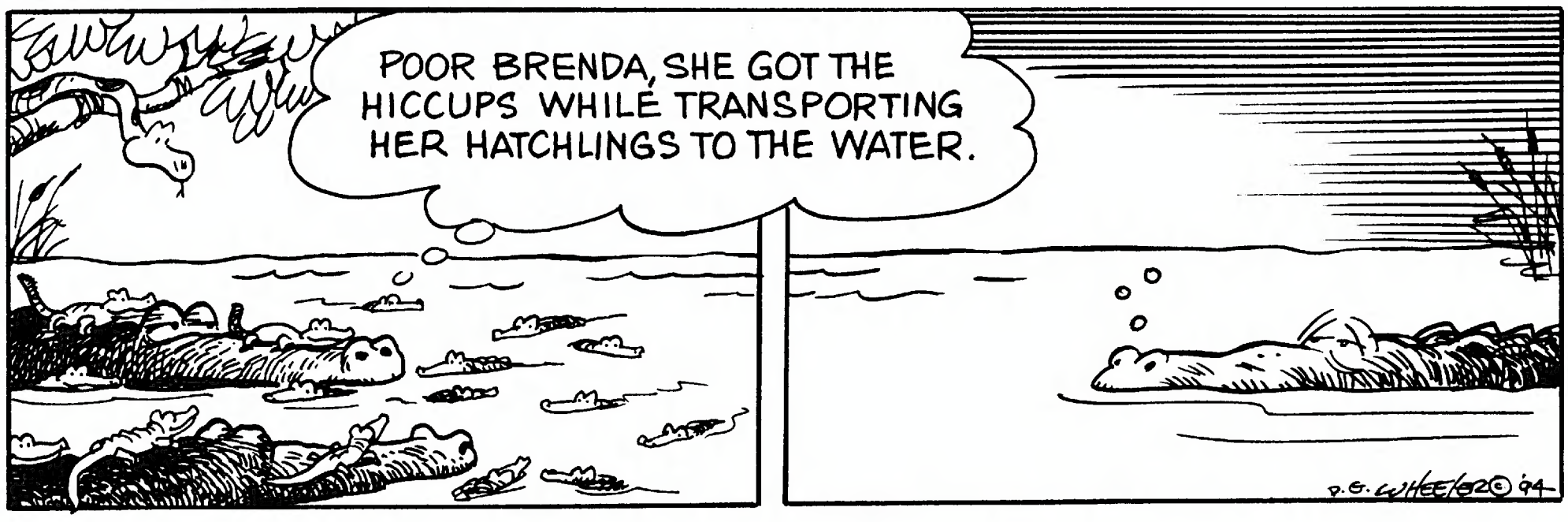
The annual CHS salamander safari will take place on Sunday, March 31. The group will meet at 9:00 A.M. at Camp Sagawau, 111th Street (Route 83) just east of Archer Avenue, in Palos Park. You are invited to observe and study (not collect) examples of the four local salamander species as they emerge from winter dormancy. Photography and handling will be permitted but all subjects must be returned to their point of origin. Bring snacks, waterproof boots, cameras and field guides to help you enjoy this chance to witness the earliest of local herp activity.

If you have questions or need directions, call Jack Schoenfelder at (219) 929-1525 evenings or (219) 464-8514 days.

MAY 19 "CAGE AND FILTER DESIGN" WORKSHOP

The next CHS-sponsored herpetology workshop will be held at 11:00 A.M., May 19, at The Grove National Landmark, 1421 Milwaukee Avenue, in Glenview. Stephan J. Swanson, Director of The Grove, will lead this workshop, dealing with the challenging topic of designing attractive and efficient cages and filtration systems for reptiles and amphibians. The registration fee for the workshop is $10 for CHS members; $15 for nonmembers. To register, call The Grove directly at (847) 299-6096. For more information on the workshop, call Nicole Marrello at (708) 430-3283.

THE ADVENTURES OF SPOT



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